REMARKS/ARGUMENTS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-20, 22-52, and 54-66 are pending in the application, with Claims 21 and 53 canceled by the present amendment.

In the outstanding Official Action, Claims 1-13, 15-21, 2-34, 47-53 and 65 were rejected under 35 U.S.C. 103(a) as being unpatentable over Grabelesky et al. (U.S. Patent No. 6,678,250, hereinafter Grabelesky) in view of Kekic et al (U.S. Patent No. 5,999,179, hereinafter Kekic); Claims 9-14, 22, 41-46 and 54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Grabelesky and Kekic in view of Feinberg et al. (U.S. Patent No. 6,798,745, hereinafter Feinberg); Claims 23 and 55 were rejected under 35 U.S.C. 103(a) as being unpatentable over Grabelesky, Kekic and Feinberg in view of Dzekian et al (U.S. Patent No. 6,704,288, hereinafter Dzekian); and Claims 4-8, 24-32 and 66 were rejected under 35 U.S.C. 103(a) as being unpatentable over Grabelesky and Kekic in view of Bearden et al. (U.S. Patent Publication No. 2003/0086425, hereinafter Bearden)

Grabelesky describes a method for monitoring and managing the performance of a real-time data network that supports voice, video and other real-time services. In the described embodiments, the RTCP mechanisms of RTP for sender and receiver reporting be used to relay performance information to one or more network monitoring sites for analysis and interpretation. In addition, gateway routers are organized and managed within a hierarchy that allows the monitoring function to localize it view of network conditions within the hierarchy; and the monitoring of network performance can occur on various time scales. Kekic describes a client-server network management system includes: a plurality of managed computer network elements, a managed element server that executes on a first computer; and at least one managed element server client that typically executes on a second computer. The

managed element server and managed element server client are computer processes that execute from memory of their respective computers.

Regarding claims 1, 33, and 65, Applicants submit a network hierarchy does not provide a teaching of a hierarchical display of network performance. The Office Action acknowledges that Grabelesky fails to teach Applicants' claimed hierarchical display of network performance. Thus, it inevitably follows that Grabelesky cannot teach a hierarchical display of network performance including a first level with first data indicative of network operation, and a second level with second data indicative of a plurality of issues comprising the first level of network performance. Nonetheless, the Office Action cites Grabelesky as providing such a teaching, which appears to contradict the assertion by the Office Action that Grabelesky fails to teach a hierarchical display of network performance. A level of a network comprising a group of networked gateway devices, as taught in Grabelesky, does not provide a teaching of a level of a hierarchical display comprising network performance issues.

Applicants submit that Kekic also fails to teach Applicants' claimed hierarchical display of network performance. Fig. 6A of Kekic shows a display of managed elements. A display of managed elements does not provide a teaching of a hierarchical display of network performance Fig. 9A shows a list of network elements under management, which does not provide a teaching of a hierarchical display of network performance. Fig. 35A illustrates highlighting variables in a hot-spot status panel. No hierarchical display of network performance is shown. Fig. 37A-M show various panels for configuring and managing network hotspots. The Office Action makes a blanket citation to these 13 drawing sheets but, without citations to specific figures, it is problematic for the Applicant to understand which aspects of the 13 drawing sheets are relied upon for the rejection. The Applicant can find no teaching in any of the cited drawing sheets or description thereof of a hierarchical display of

network performance. The applicant requests that future Office Actions cite with more specificity in order for the applicant to better understand the basis of the rejection.

Regarding claims 2 and 34, Applicants submit there is no teaching by either Grabelesky or Kekic of a hierarchical display including a first level with first data indicative of overall performance of one of the network and a selected portion of the network. Again, different levels or groups of network devices exchanging network performance data does not provide a teaching of a hierarchical display including levels of network performance data.[1]

Regarding claims 3 and 34, neither Grabelesky or Kekic teaches a second level of a network performance data display that includes at least one of connectivity and traffic issues. Applicants submit that using packet delivery delay, packet loss, and jitter information to maintain and update a database does not provide a teaching of displaying a second level of a network performance data that includes at least one of connectivity and traffic issues.[2]

Regarding claims 4 and 36, Applicants submit that providing more details about a selected device of interest does not provide a teaching of providing more details of issues of a selected level of a network performance hierarchy.[3]

Regarding claims 5 and 37, providing visualization of network behavior for a slice of time by shading devices in the network with different colors to indicate their performance does not provide a teaching of providing locations of network elements associated with a selected level of a network performance hierarchy. Providing more details about a selected device of interest does not provide a teaching of providing more details of issues of a selected level of a network performance hierarchy.[4]

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[1] Grabelesky col. 15, lines 8-10, col. 16, lines 1-8 or claims 4 and 5
[2] Grabelesky col. 15, lines 8-10, col. 16, lines 1-8 or claims 4 and 5, col. 12, lines 4-13
[3] Bearden Par. 233
[4] Bearden, par. 230, par. 231, lines 1-18, par. 233, lines 1-15

Regarding claims 6 and 38, providing more details about a selected device of interest does not provide a teaching of providing details on a selected portion of details of issues comprising a selected level of a network performance hierarchy.

Regarding claims 7 and 39, it is unclear how or why the examiner feels Fig. 16-18 of Bearden provide any teaching of sorting, according to a selected criterion, locations of network elements associated with a selected level of a network performance hierarchy, or sorting metrics corresponding to the network elements and associated with at least one issue comprising a selected level of a network performance hierarchy. Applicants submit the rejection does not make a prima facie case of obviousness and request clarification from the Examiner. Bearden describes a system for monitoring traffic on a network first discovers the network so as to map the various devices and links in the network. Statistics are then gathered from various points in the network relating to quality of service, and especially loads on the network devices. Synthetic calls are generated at selected points of the network while monitoring the network. This data is then stored and displayed in a manner that is easy for the operator to analyze, with more detailed displays being available through the use of a mouse or keystrokes. However, shading devices in the network with different colors to indicate their performance does not provide a teaching of sorting, according to a selected criterion, locations of network elements associated with a selected level of a network performance hierarchy, or sorting metrics corresponding to the network elements and associated with at least one issue comprising a selected level of a network performance hierarchy.

Feinberg describes a Quality of Service (QoS) provision for voice and other delay sensitive call connections established over the Internet and other packet-based networks is achieved by generating a QoS performance parameter value corresponding to the performance of one or more packet-based call connections utilizing common packet network resources, comparing the QoS performance parameter value to an acceptable range of QoS

values, and terminating one or more call connections utilizing common packet network resources if the QoS performance parameter value does not fall within the acceptable range of QoS values.

Regarding claims 12 and 44, Feinberg at Col. 5, lines 40-49 merely provides a blanket statement that the number of combinations and permutations of processing raw data is a matter a design choice and/or system capabilities. Such a blanket statement provides no teaching, either explicit or inherent, of weighting different performance metrics differently dependent upon perceived relevance of an issue associated with the metric to network performance. The only explicit example provided teaches a mere summation of a total number of lost packets over a one second period.

Regarding claims 13 and 45, Feinberg Col. 5, lines 40-60 describes taking corrective action or not based on the comparison; there is no teaching of providing second metrics based upon the comparison.

Regarding claims 14, 22, 46, and 54, data indicative of network performance degradation does not provide a teaching of indicia of grades of degradation. Graphing data values over time does not provide a teaching of providing indicia of grades of degradation over time.[5]

Regarding claims 15 and 47, Fig. 6A element 305 of Kekic shows a display of managed elements. A display of managed elements does not provide a teaching of a hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance. Fig. 9A shows a list of network elements under management, which does not provide a teaching of a hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance. Fig. 35A illustrates highlighting variables in a hot-spot

[5] Feinberg Col. 5, lines 40-49; Kekic See Fig. 35A, Fig. 35B; Feinberg Col. 5, lines 24-27

status panel. No hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance is shown. Fig. 37A-M show various panels for configuring and managing network hotspots, and the applicant requests further specificity from the examiner in order to better understand how these sheets are applied to the rejection.

Regarding claims 16 and 48, there is no mention or teaching in Grabelesky of a second level of a hierarchical display of performance data that includes data indicative of network issues perceived to affect network performance more than network issues absent from the display.[6] Regarding Kekic, Fig. 6A element 305 shows a display of managed elements. A display of managed elements does not provide a teaching of a hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance. A display of managed elements does not provide a teaching of a second level of a hierarchical display of performance data that includes data indicative of network issues perceived to affect network performance more than network issues absent from the display. Fig. 9A shows a list of network elements under management, which does not provide a teaching of a hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance. A display of elements under management does not provide a teaching of a second level of a hierarchical display of performance data that includes data indicative of network issues perceived to affect network performance more than network issues absent from the display. Fig. 35A illustrates highlighting variables in a hot-spot status panel. No hierarchical display of network performance that is independent of an amount of network elements contributing to the indicia of network performance is shown. Fig. 37A-M

[6] Grabelesky, Col. 8, lines 24-31; Col. 14, lines 50-58

are 13 drawing sheets that show various panels for configuring and managing network hotspots.

Regarding claims 17 and 49, Kekic Fig. 6A-6C shows a display of managed elements, and/or a display or a managed element request status, which does not provide a teaching of a hierarchical display of network performance data that includes indicia of absolute performance of portions of the network associated with respective levels. A display of the status of memory of a managed element does not provide a teaching of a hierarchical display of network performance data that includes indicia of absolute performance of portions of the network associated with respective levels (603 of Fig. 6B). Fig. 9A shows a list of network elements under management. Accepting, arguendo, the assertion of the Office Action that Fig. 9A teaches display of the status of elements in the management list, this is still not the same as a hierarchical display of network performance data that includes indicia of absolute performance of portions of the network associated with respective levels.

Regarding claims 18 and 50, Kekic Fig. 6A-6C shows a display of managed elements, and/or a display or a managed element request status, which does not provide a teaching of a hierarchical display of network performance data that includes indicia of relative performance of portions of the network associated with respective levels. Nor is a display of the status (faults) of memory of a managed element (603, 635 of Fig. 6B) the same as a hierarchical display of network performance data that includes indicia of relative performance of portions of the network associated with respective levels. Fig. 9A shows a list of network elements under management. Accepting, arguendo, the assertion of the Office Action that Fig. 9A teaches display of the status of elements in the management list, this is still not the same as a hierarchical display of network performance data that includes indicia of relative performance of portions of the network associated with respective levels.

Regarding claims 19 and 51, Kekic Fig. 6A-6C shows a display of managed elements, and/or a display or a managed element request status, which does not provide a teaching of a hierarchical display of network performance data that includes indicia of relative and absolute performance of portions of the network associated with respective levels. Nor is a display of the status (faults) of memory of a managed element (603, 635 of Fig. 6B) the same as a hierarchical display of network performance data that includes indicia of relative and absolute performance of portions of the network associated with respective levels. Fig. 9A shows a list of network elements under management. Accepting, arguendo, the assertion of the Office Action that Fig. 9A teaches display of the status of elements in the management list, this is still not the same as a hierarchical display of network performance data that includes indicia of relative and absolute performance of portions of the network associated with respective levels.

Regarding claims 20 and 52, Kekic Fig. 6A-6C and 35A-B, a display of managed elements, system status, and/or a display or a managed element request status, which does not provide a teaching of a hierarchical display of network performance data over time, that includes indicia of relative and absolute performance of portions of the network associated with respective levels. Nor is a display of the status (faults) of memory of a managed element (603, 635 of Fig. 6B) the same as a hierarchical display of network performance data over time that includes indicia of relative and absolute performance of portions of the network associated with respective levels. Regarding Fig. 9A and 35A-B, Fig. 9A shows a list of network elements under management. Accepting, *arguendo*, the assertion of the Office Action that Fig. 9A teaches display of the status of elements in the management list, this is still not the same as a hierarchical display of network performance data over time that includes indicia of relative and absolute performance of portions of the network associated with respective levels.

Regarding claims 23 and 55, Dziekan describes a hybrid fiber coaxial (HFC) access network manager is formed to support a variety of functions related to the operation and management of an HCF access plant. The network manager includes a topology discovery module that can function either automatically, or under control of a command from the access network manager, to poll individual network elements to identify their type and location, thus creating a topological map of the network. The polling can be accomplished in either the analog or digital domain. However, Dziekan fails to teach data indicating numbers of cable-modem hours at grades of degradation.[7]

Regarding claims 8, 30, and 62, Bearden provides no teaching of causing the computer to recommend action for improving network performance regarding network areas that are most-negatively contributing to network performance. Enabling an operator to see problem points does not provide a teaching of the computer recommending action for improving network performance. User interaction with a network topology display to access and change information that was gathered in the discovery phase, to change the placement of links and devices by manual intervention, or to access more detailed views of the collected data does not provide a teaching of the computer recommending action for improving network performance regarding most negatively contributing areas.[8]

Regarding claims 8, 31, and 63, Applicants submit that the claimed instructions for causing the computer to implement action to improve network performance regarding network areas that are most-negatively contributing to network performance are neither taught nor inherent in any of the cited references.

[7] Dziekan Col. 1, lines 31-53
[8] Bearden Paragraph 231, lines 21-27; Paragraph 233, lines 1-15

Regarding claims 32 and 64, storing collected information in a storage area does not provide a teaching of obtaining indicia of cumulative amounts of time that network elements cause a computer to access a storage area.[9]

MPEP §706.02(j) notes that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Also, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Without addressing the first two prongs of the test of obviousness, Applicants submit that the Official Action does not present a *prima facie* case of obviousness because none of the cited references disclose all the features of Applicants' claimed invention.

Regarding claims 24, 56, and 66, Kekic Fig. 6C shows element managers in hierarchical detail; this does not provide a teaching of a hierarchy of network performance. Kekic does not show a network performance hierarchy nor does it show a hierarchical display including a first level with first data indicative of network operation, and a second level with second data indicative of a plurality of issues comprising the first level of network performance. Fig. 6A-B of Kekic also fail to describe these aspects. Kekic does not show display of a plurality of sub-categories contributing to a summary category of network issues, the sub-categories each further comprising at least one sub-sub-category contributing to the

[9] Bearden, Fig. 4 element 340; claim 21; claims 18, 19, 20

sub-categories. Instead, Kekic Fig. 6C shows a list of element managers, with subcategories of features of the element managers.

Furthermore, Applicants submit it would not be obvious to combine the display of Kekic with the display of Bearden to achieve a network performance hierarchy as described in the claims. Bearden teaches flat (single level) graphical plots, whereas the claims are directed to hierarchical displays. It would not be apparent to one skilled in the art to apply the teachings of Bearden to systems comprising hierarchical displays. Furthermore, Applicants submit it would not be obvious to one skilled in the art to apply the network performance data of Bearden in the Kekic display, because the Kekic display is not a hierarchy of network performance.[10]

Regarding claims 26 and 58, associating data with portions of the network does not provide a teaching of indicating that categories of a performance hierarchy contributing to a higher-level category of the hierarchy are one of direct contributors and indirect contributors. Bearden teaches flat (single level) graphical plots, whereas the claims are directed to hierarchical displays. It would not be apparent to one skilled in the art to apply the plots of Bearden to systems comprising hierarchical displays.[11]

Thus, Applicants submit it is only through an impermissible hindsight reconstruction of Applicants' invention that the rejection of Claims 24, 26, 56, 58 and 66 can be understood.[12]

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[10] Bearden Fig. 19A-B, 20A-D, 21, 22, 23; Paragraph 244
[11] Bearden Paragraph 238
[12] MPEP § 2143.01 "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge of one of ordinary skill in the art."

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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